

MS#183303.01 (4965)
PATENTREMARKS

Applicant has thoroughly considered the Examiner's remarks in the May 20, 2004 Office action and presents claims 1-60 for further examination. Applicant has amended claims 44 and 48 in this Amendment A. Applicant respectfully requests reconsideration of the application claims as amended and in view of the following remarks. The following remarks will follow the sequence of the Office action.

Response to Claim Rejection under 35 U.S.C. § 102(e)

Claims 1-11, 13, 14, 18-24, 29-32, 34-36, 38, 39, 43, 48-50, and 52-58 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Shah et al. (U.S. Patent Application Publication No. 2002/0099692). Applicant submits that each and every element as set forth in the recited claims is not found, either expressly or inherently, in the Shah reference. Thus, the Shah reference does not anticipate the claims.¹

Regarding claim 1, the Office action states that Shah et al. disclose "*a partitioned dimension containing a first subset of the members of at least one lower level of the general dimension.*" The Office action also states that Shah et al. disclose that *the lower level associated with the partitioned dimension is lower in the hierarchy than the upper level associated with the summary cube and that the general dimension is partitioned based on a selected member of the upper level to form the partitioned dimension.* Particularly, the Examiner points to Shah et al., at paragraphs 53 and 91 as disclosing such aspects of the present invention.

Applicant respectfully disagrees with these arguments. As stated in paragraph 4 of the Shah reference, one problem that Shah et al. seek to solve is that most applications fail to deliver useful metrics that provide unique insights into an organization's performance. The Shah reference asserts that business analysts must execute multiple queries and other time-consuming manual interventions to produce these metrics. Shah et al. thus disclose a system, method, and

¹ See *Verdegual Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987) (A claim is anticipated only if each and every element as set forth in the claim is disclosed, either expressly or inherently in a single prior art reference).

MS#183303.01 (4965)
PATENT

apparatus for calculating metrics by using hierarchical level metadata to describe the various structures within a database.

As further stated in the summary of the Shah reference:

The database in this approach includes fact and dimension tables which may be, for example, configured in a star schema having a central base fact table with surrounding dimension tables to form the star structure. Aggregate fact tables may also be provided which aggregate measures from the base fact table at a higher hierarchical level than such measures are maintained in the base fact table. Metadata is further stored in the database, where the metadata describes the organization of the various tables in the database, and specifically the metadata . . . includes information about the hierarchical levels of various dimensions of the above-mentioned tables and star schema.

(*Shah et al.*, paragraph 0006)

Even though the Shah reference discloses a database organized into fact tables and dimension tables, which further include multiple levels of hierarchy (*See Shah et al.*, FIGS. 1-3A), it is entirely silent as to a dimension *partitioned* based on a selected member of an upper level of a general dimension. Particularly, the Shah reference fails to disclose *partitioning* of one or more dimensions to improve the processing of large dimensions and user navigation experience. Moreover, not only does the Shah reference fail to disclose or teach the *dimension-based partitioning* of the present invention, it also fails to disclose or teach a *summary cube* including members of at least one upper level of the general dimension such that the lower level associated with the partitioned dimension is lower in the hierarchy than the upper level associated with the summary cube.

Applicant further notes that contrary to the Office action, paragraph 53 of the Shah reference merely describes a step of metric calculation. In particular, paragraph 53 of the Shah reference teaches that when a level of dimensions requested by a user or a lower level is not supported, the fact table associated with a star is rejected, and a determination is made whether any remaining stars are present in a stargroup. Paragraph 53 of the Shah reference further teaches that when a remaining star exists in the stargroup, the star associated with the next most highly aggregated table is selected and that when there are no remaining stars, data may not be obtained for the particular

MS#183303.01 (4965)
PATENT

measure. The reference fails to explain how such a determination as to if a star is present in a stargroup relates to the *dimension-based partitioning* of the present invention.

Similarly, contrary to the Office action, paragraph 91 of the Shah reference merely discloses a graphical user interface (GUI) that includes a hierarchical listing of each of the dimensions. Particularly, paragraph 91 of the Shah reference teaches that a user can click on a particular dimension in the GUI and view metrics calculated for a constraint as well as the lower levels of the dimension hierarchy. Again, even though paragraph 91 of the Shah reference shows a dimension organized into multiple levels of hierarchy, it fails to disclose or teach *partitioning* of a dimension based on a selected member of a particular level of the dimension as set forth in the claims.

In light of the above, Applicant submits that Shah et al. fail to disclose each and every element of claim 1. Accordingly, claim 1 is believed to be allowable over such art.

Claims 2-11, 13, and 14 depend from claim 1 and are believed to be allowable over the Shah reference for at least the same reasons that claim 1 is allowable over such art.

Claim 18 recites "*partitioning at least one of the dimensions based on a selected member of an upper level of the dimension to be partitioned.*" Claim 48 recites the "*subset of the members of the lower level being partitioned from the dimension based on a selected member of the upper level*" and is further amended to recite the "*lower level associated with the partitioned dimension component being lower in the hierarchy than the upper level associated with the summary cube database component.*" Claim 52 recites "*partitioning the target dimension based on a selected member of the service level.*" Again, Applicant submits that the Shah reference fails to disclose or teach the *dimension-based partitioning* of claims 18, 48, and 52.

In addition, claim 48 further recites "*a navigation component for implementing zoom in/zoom out events to navigate between information in the summary cube database component and information in the detail cube database component.*" The Examiner points to Figure 3A of the Shah reference as disclosing this aspect of the invention. However, Figure 3A of the Shah reference merely illustrates a star schema of a fact table and dimension tables. The reference fails to show how such a star schema relates to a navigation component for implementing zoom in/zoom out events, as recited in claim 48.

MS#183303.01 (4965)
PATENT

Moreover, claim 52 recites that the *"target dimension contain[s] members of a plurality of levels"* and that the *"levels includ[e] a service level containing members representative of a plurality of Web services."* Applicant submits that Shah et al fail to teach or suggest that the levels of the target dimension include a service level containing members representative of a plurality of Web services.

In light of the foregoing, Applicant submits that Shah et al. fail to disclose each and every element of claims 18, 48, and 52. Accordingly, claims 18, 48, and 52 are believed to be allowable over Shah et al.

Claims 19-24, 29-32, 34-36, 38, 39, and 43 depend from claim 18; claims 49 and 50 depend from claim 48; and claims 53-58 depend from claim 52. Therefore, these claims should be allowable over the Shah reference for at least the same reasons that claims 18, 48, and 52 are allowable over such art.

Response to Claim Rejection under 35 U.S.C. § 103(a)

Claims 12, 15-17, 25-28, 37, 40-42, 44-47, 59, and 60 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shah et al. in view of Pitts et al. (U.S. Patent Publication No. 2003/0115194). Applicant respectfully disagrees. In any case, claims 12 and 15-17 depend from claim 1; claims 25-28, 37, and 40-42 depend from claim 18; and claims 59 and 60 depend from claim 52. Thus, claims 12, 15-17, 25-28, 37, 40-42, 59, and 60 are believed to be allowable for at least the same reasons that claims 1, 18, and 52 are allowable over such art.

Claim 44 recites that *"first subset of the members of the lower level being partitioned from the dimension based on a selected member of the upper level"* and is further amended to recite the *"lower level associated with the first partitioned dimension component being lower in the hierarchy than the upper level associated with the summary cube database component."* Applicant submits that neither the Shah reference nor the Pitts reference discloses or teaches *partitioning* of a dimension based on a selected member of the upper level, as recited in claim 44.

Additionally, claim 44 recites *"a template component for implementing a workflow to automatically create a second partitioned dimension component and a second detail cube database component."* The Office action states that Figures 3, 4, and 5 and paragraph 39 of the

MS#183303.01 (4965)
PATENT

Pitts reference disclose this aspect of the invention. Nevertheless, Figure 3 of the Pitts reference merely illustrates a client, a database server, an application server, and a web server. Figure 4 of the Pitts reference illustrates information relationships of a metric. Figure 5 of the Pitts reference illustrates how measures, facts, functions, components, and parameters are interrelated. And paragraph 39 of the Pitts reference describes an environment including a client and a metrics engine. Nothing in the reference suggests how such illustrations and descriptions would disclose the template component recited in claim 44.

Thus, Shah et al., whether or not in combination with Pitts et al., fail to disclose each and every element of claim 44. Thus, claim 44 is believed to be allowable over such art. Claims 45-47 depend from claim 44 and are believed to be allowable for at least the same reasons that claim 44 is allowable over such art.

Claims 33 and 51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shah et al. in view of Wong et al. (U.S. Patent No. 6,708,172). Applicant respectfully disagrees. Specifically, the essence of the rejection relates to the argument that it would be obvious to apply the teachings of Shah et al. that relate to the various structures within a database to the totally unrelated system and method of Wong et al. relating to a web browsing environment that provides a graphical spatial context to associate websites to one another. (*See Wong et al., Abstract*). Thus, the references primarily cited by the Examiner are a mere aggregation based on hindsight analysis of the claims.² Neither reference suggests the applicability of Wong et al. to a database system. Without such a teaching, the obviousness rejection falls short and must be withdrawn. "[T]he question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination."³ As has been shown, the non-analogous teachings of the prior art relate to different fields of endeavor and are directed to entirely different problems. Therefore, nothing in the cited references suggests their combination.

² *See In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992) ("There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge can not come from the applicant's invention itself.").

³ *Lindemann MaschinenFabrick GMBH v. Am. Hoist & Derrick Co.*, 730 F.2d 1452, 1462 (Fed. Cir. 1984).

MS#183303.01 (4965)
PATENT

Furthermore, claim 33 depends from claim 18, and claim 51 depends from claim 48. Accordingly, claims 33 and 51 are believed to be allowable for at least the same reasons that claims 18 and 48 are allowable over such art.

Conclusion

It is felt that a full and complete response has been made to the Office action and, as such, places the application in condition for allowance. Such allowance is hereby respectfully requested. If the Examiner feels, for any reason, that a personal interview will expedite the prosecution of this application, he is invited to telephone the undersigned.

Any required fees or overpayments should be applied to Deposit Account No. 19-1345.

Respectfully submitted,



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